

gasket positioned around the exterior of the plastic pipe within the below ground open end of the outer pipe; and a second cylindrical crimp formed in the outer pipe adjacent to the second gasket to thereby form a second seal between the plastic pipe and the outer pipe.

[0025] A preferred ductile pipe to plastic pipe transition connection of this invention comprises: an outer ductile pipe; a plastic pipe disposed within the outer ductile pipe; a hollow rigid stiffener disposed within the interior of the plastic pipe; a gasket positioned around the exterior of the plastic pipe adjacent to the stiffener; and a crimp formed in the outer ductile pipe adjacent to the stiffener and the gasket whereby the outer ductile pipe is compressed against the gasket, the plastic pipe and the stiffener to thereby form a seal between the plastic pipe and the ductile pipe.

[0026] Thus, the present invention is well adapted to carry out the objects and attain the ends and advantages mentioned as well as those which are inherent therein. While numerous changes may suggest themselves to those skilled in the art, such changes are encompassed within the spirit of this invention as defined by the appended claimed is.

What is claimed is:

1. A gas service riser assembly comprising:
  - an outer ductile pipe;
  - a plastic pipe having open ends disposed within said outer ductile pipe and extending through one end thereof;
  - a hollow rigid stiffener disposed within the interior of a portion of said plastic pipe within said outer ductile pipe;
  - a gasket positioned around the exterior of said plastic pipe adjacent to said stiffener; and
  - a crimp formed in said outer ductile pipe adjacent to said stiffener and said gasket whereby said outer ductile pipe is compressed against said gasket, said plastic pipe and said stiffener to thereby form a seal between said plastic pipe and said ductile outer pipe.
2. The riser assembly of claim 1 which further comprises:
  - a second gasket positioned around the exterior of said plastic pipe within said end of said outer ductile pipe through which said plastic pipe extends; and
  - a second crimp formed in said outer ductile pipe adjacent to said second gasket to thereby form a second seal between said plastic pipe and said ductile outer pipe.
3. The riser assembly of claim 1 wherein said outer ductile pipe is a metal pipe.

4. The riser assembly of claim 1 wherein said outer ductile pipe is a steel pipe.

5. The riser assembly of claim 1 wherein said outer ductile pipe is metal tubing.

6. The riser assembly of claim 1 wherein said outer ductile pipe is steel tubing.

7. The riser assembly of claim 1 wherein said hollow rigid stiffener is formed of metal.

8. The riser assembly of claim 1 wherein said hollow rigid stiffener includes a plurality of radial serrations along the outside length thereof.

9. The riser assembly of claim 1 wherein said hollow rigid stiffener is positioned in the open end of said plastic pipe within said outer ductile pipe and includes a flange that extends radially outwardly from said plastic pipe to a position near said outer ductile pipe and adjacent to said crimp.

10. A gas service riser assembly comprising:

an outer ductile metal pipe having open ends with a portion thereof adapted to extend above ground and the other portion thereof adapted to extend below ground; a plastic pipe having open ends, the upper open end being positioned within said above ground portion of said outer pipe with said plastic pipe extending through the below ground portion of the outer pipe and through the open end thereof;

a hollow rigid metal stiffener disposed within said upper open end portion of said plastic pipe having a flange that extends radially outwardly from said plastic pipe to a position near said outer pipe;

a gasket positioned around the exterior of said plastic pipe adjacent to said stiffener;

a cylindrical crimp formed in said outer pipe adjacent to said stiffener and said gasket whereby said outer pipe is compressed against said gasket, said plastic pipe and said stiffener to thereby form a seal between said plastic pipe and said outer pipe;

a second gasket positioned around the exterior of said plastic pipe within said below ground open end of said outer pipe; and

a second cylindrical crimp formed in said outer pipe adjacent to said second gasket to thereby form a second seal between said plastic pipe and said outer pipe.

11. The riser assembly of claim 10 wherein said outer ductile metal pipe is a steel pipe.

12. The riser assembly of claim 10 wherein said outer ductile metal pipe is steel tubing.

13. The riser assembly of claim 10 wherein said hollow rigid metal stiffener is formed of steel.

14. The riser assembly of claim 10 wherein said hollow rigid metal stiffener includes a plurality of radial serrations along the outside length thereof.

15. The riser assembly of claim 10 wherein said gasket positioned around the exterior of said plastic pipe adjacent to said stiffener is a rubber gasket.

16. The riser assembly of claim 10 wherein said second gasket is a rubber gasket.

17. The riser assembly of claim 10 wherein said open end of said outer pipe above ground is adapted to be connected to a gas meter.

18. The riser assembly of claim 10 wherein said open end of said plastic pipe below ground is adapted to be connected to a source of gas.

19. A ductile pipe to plastic pipe transition connection comprising:
- an outer ductile pipe;
  - a plastic pipe disposed within said outer ductile pipe;
  - a hollow rigid stiffener disposed within the interior of said plastic pipe;
  - a gasket positioned around the exterior of said plastic pipe adjacent to said stiffener; and
- a crimp formed in said outer ductile pipe adjacent to said stiffener and said gasket whereby said outer ductile pipe is compressed against said gasket, said plastic pipe and said stiffener to thereby form a seal between said plastic pipe and said ductile pipe.
20. The transition connection of claim 19 wherein said outer ductile pipe is a metal pipe.
21. The transition connection of claim 19 wherein said outer ductile pipe is a steel pipe.
22. The transition connection of claim 19 wherein said outer ductile pipe is metal tubing.
23. The transition connection of claim 19 wherein said outer ductile pipe is steel tubing.
24. The transition connection of claim 19 wherein said hollow rigid stiffener is formed of metal.

25. The transition connection of claim 19 wherein said hollow rigid stiffener includes a plurality of radial serrations along the outside length thereof.

26. The transition connection of claim 19 wherein said hollow rigid stiffener is positioned in the open end of said plastic pipe within said outer ductile pipe and includes a flange that extends radially outwardly from said plastic pipe to a position near said outer ductile pipe and adjacent to said crimp.